

There are sections (all bookmarked for easy navigation) to guide you through registering the project, finding errors, and obtaining help (send your *.ribd19 file to cbecc.res@energy.ca.gov).

1.3 What's New and Different in CBECC-Res 2019

While some of the changes to the 2019 *Building Energy Efficiency Standards* are mentioned in this document (because of the connection to performance compliance), it is highly recommended that you download the *Residential Compliance Manual* (see Section 1.14) which has a “new for 2019” section at the beginning of almost every chapter.

On May 15, 2019, the CEC approved the 2019 *Building Energy Efficiency Standards*. Below are highlights of the biggest changes affecting compliance as well as new features of CBECC-Res 2019.1.2:

➤ NEW FEATURES:

- Variable capacity heat pump compliance option, Section 8.2.6.
- Central heat pump water heater for multifamily buildings, Section 9.11.
- CFI2 is a new option for California Flexible Installation (generic roof orientation for the PV system), Section 4.4.1.9.
- PV exception for declared emergency zones (AB 178), Section 4.4.1.2.
- Solar thermal water heating internal rather than OG-100 or OG-300, Section 9.6.
- Shading from permanent obstructions that reduce the effectiveness of photovoltaic (PV) systems, Section 4.4.
- Ability to model an altered roof surface (a big improvement in zones with roof deck insulation), Section 10.6.2.

➤ GENERAL CHANGES FOR 2020

- The new email address for support is cbecc.res@energy.ca.gov.
- The name for the file to upload to a HERS providers is (*.CF1RPRF01E-BEES.xml).
- In climate zones with no requirement (NR) for the Solar Heat Gain Coefficient (SHGC) of fenestration, the value assumed by compliance software for those zones becomes 0.35 (previously 0.50).
- Climate Zone 16 joins Climate Zones 1, 3, and 5 as a zone with NR or 0.35 SHGC in the standard design for fenestration.
- Because a kitchen may not be included in all newly constructed buildings, the checkbox under the run scope (analysis tab) is no longer limited to additions and alterations. If the

project has no kitchen, or the project construction does not include the kitchen, uncheck this box. (A future edition of CBECC-Res will allow greater control of the appliances included in the project.)

- The natural gas availability checkbox is no longer relevant. If the project uses propane, select propane from the menu, otherwise leave this as natural gas. In the 2019 standards, if your proposed water heating is electric, the standard design is a heat pump water heater (for a full list of the criteria, see Section 150.1(c)8Aiv). If the proposed space conditioning system is a heat pump, the standard design continues to be a heat pump. NOTE: For a complete electric building, on the appliances tab, change dryer and cooking to electric (Section 4.7.1.10).

➤ COMPLIANCE

- Compliance is based on two parts of the energy design rating (EDR) for newly constructed buildings (see Section 1.3.3). The concept is the closer to zero, the better.
- Once you calculate the performance for a project, if it does not comply (or you want to see the details of the heating, cooling, and water heating compliance because that is what you are used to seeing), click on the “energy use details” tab (see Section 2.10.3) to see where it is out of compliance.
- Solar electric generation will be required to achieve compliance on newly constructed buildings (not additions/alterations).
- Quality insulation installation (QII) is included in the energy budget (although not mandatory) for most newly constructed buildings and in large additions. The exceptions are:
 - Existing+addition compliance for an addition that is less than 700 ft²,
 - Multifamily buildings in Climate Zone 7.
- Additions and alterations continue to use kTDV rather than EDR used for newly constructed building compliance.
- If your project is an accessory dwelling unit (ADU) look for new inputs on the **analysis** and **building** tabs and a new **ADU** tab (see Chapter 4). Chapter 10 includes past interpretations with regard to calling an ADU an addition or new construction, and the application of exceptions to the continuous insulation requirement on exterior walls.

➤ WATER HEATING

- New construction uses consumer instantaneous/UEF-rated water heaters as the standard design. Only existing water heaters can use the previous types such as small storage.
- A new compliance option for a compact design (Section 9.3.1) of the water heating system requires the distance (plan view) to the kitchen, master bath, and the farthest point other

than kitchen/master bath. There is a basic option (no HERS requirement), and an enhanced option (HERS verification required).

- Drain water heat recovery (Section 9.3.4) is a new water heating option (HERS verification required).

➤ **IAQ**

- New inputs are required to determine compliance with Section 150.0(o). Most are on the **IAQ** tab:
 - A rarely used check box to indicate that your input file is for one dwelling unit of a duplex or townhome.
 - Maximum vertical distance, which is the highest point of the ceiling (it defaults to the value input for ceiling height on the zone tab).
- ADUs are a new dwelling unit and must comply with IAQ requirements regardless of size. If the building is not an ADU, then it is an addition.
- The identification of a building as an ADU on the Building tab is only for additions (see Section 4.7.1.8).

➤ **MECHANICAL**

- Whole house fans previously needed an attic in order to include it in your proposed design. This resulted in a penalty in some climate zones if the project had no attic. It is now possible to model a whole house fan vented to the outside. This option is on the **cool vent** tab.
- Whole house fans with a default size (1.5 CFM/ft²) can be modeled with or without HERS verification. With HERS verification, the fan receive full credit based on its capacity. If the HERS verification is unchecked, the capacity/effectiveness is reduced by 30 percent. If you pick “specify” and define the characteristics of the fan, HERS verification is required (see Section 8.7.1).
- Buried ducts or verified duct design now includes more advanced modeling (see Section 8.4.4).

➤ **TERMS DEFINED**

- Several new terms used in 2019 standards compliance are included in Section 1.15.